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THE SPASMODIC CHOLERA.

Remarks on the Pathological Character of the prevailing Spasmodic Cholera, and on the Therapeutic Application to it of Remedial Agents. By J. A. ALLEN, M.D. Middlebury, Vt.

[Communicated for the Boston Medical and Surgical Journal.]

THE present epidemic meteoration, wherever its influence is experienced, manifests its presence and its efficient operative powers upon the human body by the production of a derangement, augmentation, or a suspension of the functions of a part or all of the following systems.

1. The cholera epidemic meteoration is manifested upon the absorbent and exhalant systems, by an entire suspension of the action in some portions of these systems; while in other portions the functions are morbidly increased. The functional disturbance of the absorbents and exhalants of the dermoid and mucous systems, is evinced by an extraordinary change in the quantity and quality of the common effusions of these organic textures. In the dermoid system, a morbid torpidity of the absorbents, or an augmented action of the exhalants, is shown by the copious serum-like sweat, which in cholera *asphyria* covers the external surface. The mucous membrane of the stomach and bowels participates in the same kind of diseased action, which seems to be demonstrated by the increased quantity of sero-aqueous dejections. The mucous secretions of the mouth and bronchia, although not augmented in quantity, seem to be altered in quality; which is denoted by the slimy matter in the mouth, white coat on the tongue, and cold halitus expired from the lungs. The glandular system is no less impaired in its regular healthy function, than the systems enumerated. The secretions of urine and bile are suspended in their actions. These secreting organs are probably not morbidly deranged, but merely in a state of inaction or torpor; for it is a well-established law of the animal economy, if one system or organ be greatly exalted in its actions, some other system or organ will be proportionally diminished in its functional operations. The intestinal effusions in all fully developed cholera cases, as we have seen, are greatly augmented and changed. Indeed, a severe morbid action of the absorbent and exhalant systems appears to extend through the whole extent of the

vascular and cellular systems ; for it must be by the abnormal action of these emunctories, that the serum of the blood and sebaceous deposit are so speedily eliminated from the body. That these principles are really thus removed in this complaint, is proved by the loss of the serum, leaving merely the thick, dark crassamentum in the bloodvessels, in the fatal and protracted cases, while the serum is seen in the '*watery dejections, or vomitings of a whitish fluid,*' which Dr. Good gives as a specific or pathognomonic symptom of cholera *spasmodica*. These dejections have in fact in India, in Europe and in America, with but few exceptions, been the precursors of cholera *asphyxia*. The duration of these *rice water discharges*, anterior to the dreaded subsidentia, is various. It usually continues from a few hours to several days or weeks. 'It would seem,' says Dr. J. W. Francis, 'that the amount of the premonitory alvine discharges forms at least some criterion of the crassitude of the sanguineous mass, and furnishes data to regulate our prognosis.' Dr. McNaughton remarks, that, 'in a vast majority of cases, a severe attack of cholera is preceded by a well-marked diarrhoea.' The *severity* of the diarrhoea appears often to bear an intimate relation to the intensity of the following natural subsidence. This is probably in consequence of the blood having, by the unnatural discharges, lost a larger proportion of its watery part than it has when these dejections have been moderate. Its liquidity having been thus diminished, its circulation must be rendered more difficult, and the stage of asphyxia ensues as an unavoidable physical result. The *free oil* which has been reported, by Dr. Paine, to exist in an uncombined state in the blood of cholera patients, must obviously be derived from the contents of the cellular system, by the morbid action of the internal absorbents and exhalants. This oil is unquestionably an educt, not a product, of morbid functions. Torpor seems everywhere to pervade the action of the external absorbent system, while considerable portions of the action of the internal are morbidly augmented. That the morbid actions are as intense and as extensive as it is here assumed, appears to be further confirmed by the sudden emaciation, shriveled and sunken countenance, and, more than all, by the absolute change in the blood itself, which has been demonstrated by Dr. O'Shaughnessy.

2. Another distinguishing trait in the character of the present epidemic meteoration, is its tendency to induce an uncommon sedation, or an unequal distribution of the neuralgic influence upon the several systems, and especially upon those essentially concerned in the functions of organic life. In this section of the country, since the epidemic influence has been sensibly operative, a failure of nervous power has been experienced in very many instances, by an unusual debility or subsultus, unattended by any other perceivable disorder, unless a slight coat upon the tongue might indicate a derangement of the mucous membrane of the stomach and bowels, by a sympathetic relation dependent on identity of texture. L. C., a healthy man of temperate habits, awoke in the night in such a state of prostration, accompanied with subsultus, that it was with much difficulty he could speak intelligibly, or walk without staggering for several days. Several children, with mild cholera *infantum*, have suddenly sunk into a state of exhaustion, and died. These, as well as many

other facts extant, plainly show an important change in the prevailing diathesis. Most diseases assume a more typhoid or atonic character. The most serious circumstance in the present diathesis, is the disposition which obviously exists, more especially in cholera cases, to fasten a deadly sedative upon the ganglionic system ; thereby destroying the acknowledged centre of reflection to the systems essentially concerned in the preservation of organic life. It is probably the morbid action of the semilunar ganglions, or of the solar plexus, which gives such severe distress of sinking and heat at the pit of the stomach, that is common in cholera *asphyxia*. Autopsic appearances have also fully demonstrated the morbid action of the ganglionic system. Several of the morbid appearances of the semilunar ganglion, at Paris, reported by Pennock and Gerhard, as well as sixteen cases out of twenty examined at Edinburgh by J. Lizars, exhibited in a conspicuous manner the severity of the disease to which the system of ganglions had been subjected. In India often, and in America not unfrequently, the nervous power of this system appears to have been almost instantaneously exhausted, like the electric fluid from a leaden-jar, without any noticeable morbid action in any other system. Persons more usually, however, have been apprised of the approach of these sudden events, by some disturbance in the epigastric region. Under such circumstances, a man recently died in my vicinity. In the worst cases, it has often been repeated that there is neither puking nor purging. These cases show an absolute want of nervous power in the vital organs, and do in fact constitute the genuine '*Mors Epidemica*.' In these cases, there is the absence of the common forming stage of asphyxied cholera. Similar omissions have often been witnessed in other severe epidemics. During the prevalence of the plague, and the spotted and yellow fevers, such events have been witnessed in each malady.

In spasmodic cholera, the cerebrum, or that portion of the nervous system which is efficient in the intellectual operations, or concerned directly with the organs of animal life, does not appear to be seriously affected. Aside from a peculiar abstraction which exists in various degrees of intensity, the mind is clear, and the muscles subservient to volition are moved at will in a pulseless and apparently moribund state. M. W., a patient of Dr. Blinn, in this vicinity, a few minutes before death from cholera *asphyxia* turned easily on his side and adjusted the pillow under his head ; and I have recently seen a man, in a similar state, exert sufficient influence on the voluntary muscles to rise in bed and swallow some liquid nourishment. Such an exertion, under such circumstances, must obviously endanger life, although no observable evil was experienced in this instance. Autopsy has rarely shown any marks of disease in that portion of the nervous system immediately connected with the organs of animal life. The morbid appearances observed have uniformly denoted merely a torpor of the capillaries of the venous system. Are the organs of sensation and volition comparatively exempt from disease in cholera *spasmodica*, till they are forced to yield by the suspension of the functions of the systems of organic life ?

3. In the prevailing cholera, a morbid condition of the muscular system is manifested by an universal subsultus, or by a violent entastic action

of the muscles. The abdominal and gastrocnemii muscles have usually been most affected, although none of the muscular system, it would seem, have been exempt. In this region, spastic action of the muscles has in some degree been commonly present in the *mild cholera* or *cholérine*. The inordinate action of the muscular system, it appears from the concurrent accounts of the cholera from most of the principal places at which it has occurred in this country, has been less violent than it was in India at the commencement of the epidemic. The spasmodic severity, it would seem, although this symptom is taken as a nominal specific character, is frequently less in this disorder than it is in cholera *biliosa*. Spasms do generally occur, and their violence and continuance may induce such exhaustion as to increase the danger of the case; but, generally speaking, the degree of danger does not appear to be at all in proportion to the violence of the spasms. Indeed, we have been informed by Mr. Orton, that at Bombay, 'those cases which to common observation might appear most desperate, in consequence of the extreme violence of the spasms and retchings, were actually the most tractable.' The same facts have been observed in this country. At New York, Albany, and Montreal, the most fatal cases have not been represented as those most affected with spasms. In this part of Vermont, the fatal cases have appeared to suffer but little from this source. In some other cases the spasms have been more severe, and in the cholera *diarrhæa* they have been very often present. This derangement of the muscular system plainly denotes an unequal distribution of the nervous power, or a diminution of this power. Deprived in any degree of its accustomed nervous influence, the muscular system will be impaired in its functions: its normal *vis insita* cannot sustain its healthy action. In speedily fatal cases, the nervous power is so suddenly suspended that there is no time for rigid spasms; but there remains only slight agitating contractions, from the inherent organization of the muscular fibre, which usually continue for a short time after life is extinct.

4. There is sometimes an excited action of the vascular system in the incipient stage, which is not unfrequently ushered in by a chill. In other instances, the vascular action is languid and feeble from the onset of the disorder. A derangement of the functions of the chylopoietic viscera ordinarily precedes or accompanies each of these states. The subsequent subsidence of the action of the vascular system, is what constitutes an important and alarming event in the progress of the disease, and that which marks its most malignant character. The developement of this state of the vascular system constitutes the cholera *asphyxia*, or cholera *acrotisma*. The accession of this acrotism has generally been regarded as the attack of the *cholera*; but it is evidently only a continued catenation of morbid action—a diseased action of the vascular system, superadded to the functional disturbances already present. Prior to this event, there is in most instances the same diseased state of the secretants and exhalants, and of the muscular and nervous systems. The degree of intensity of these functional derangements may vary in different cases, being influenced by constitutional idiosyncrasy, local causes, and the like. The blood, during this vascular subsidence, already changed and still changing in its physical and chemical characters, becomes lodged in the

capillaries ; giving to the external surface a *blue* or *livid* aspect, while from the feeble efforts of the heart and arteries, owing probably to a deficiency of nervous influence, an engorgement of some of the internal viscera ordinarily ensues. The pathological change in the character of the blood, in consequence of the loss of its serum, by its affording a physical obstruction to its free circulation, may be the cause of the sinking of the pulse in *some cases* ; and in others, this death-like subsidence of the vascular action must obviously occur in consequence of a failure of the nervous power which sustains this system. In many cases, it is very probable that this failure of the pulse is produced by the joint operation of both these causes. This altered state of the blood, it is self-evident, must afford a serious obstacle to the healthy action of the organs ; while it is equally evident that this change in the constituents of the blood demonstrates an important functional alteration in the secretions and exhalants, which in their turn are aggravated by the morbid condition of the circulating fluid.

From the preceding considerations, the extreme danger of cholera *asphyxia* is obvious. Taking into the account the aggregate of all the diseased functions and their particular morbid characters, it is rather a subject of astonishment that there should have been so many recoveries from such a malady, by such a farrago of medication as has been adopted, than a matter of surprise that so many have died.

(To be continued.)

SALINE INJECTIONS IN CHOLERA.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—I wish, through the medium of your Journal, to ask the attention of the profession to one of the remedies for cholera, which has not yet, as I conceive, received a sufficiently thorough trial. I mean the *saline injection into the veins*. It is very true, that this measure has in almost all cases failed to preserve life ; but it is equally certain that it has almost always produced a partial and temporary amendment, sometimes a very surprising one. It remains yet to be determined whether some combination of means may not be devised, which shall maintain the ground gained by the injection. These means may be those which precede, as well as those which accompany and follow the operation.

But it is not to this point I intend chiefly to request the attention of physicians. I am ready to argue in favor of the universal employment of this remedy in cases of collapse, upon the ground of what it *now* does. As we have not data upon which to determine what has been the result of all the cases in Europe, I will go no further than New-York. According to Dr. Francis, in his published letter, four out of forty-two were saved. But to take a less favorable statement ; in the Crosby Street Hospital, two out of thirty were saved—and in the Greenwich, one out of thirteen. This will make, to take the very worst of the matter, only one out of fifteen, or about seven per cent.

Now one case out of fifteen is very little to save, it would seem ; and

so it would be of cases taken as they rise. But it is to be recollected, that this seven per cent. is just so much *added* to the cases of recovery. It is in fact diminishing the ordinary mortality of the disease just so much. No cases out of those which form the basis of this calculation, were cases that could have recovered with other means. The patients were not taken till those symptoms had presented themselves which are invariably followed by death; and those who have seen this disease will probably admit that, although a mistake of prognosis might sometimes occur, it is not likely to occur often enough essentially to affect the correctness of the general remark.

Now this, I say, is as much as can be *proved* with regard to any remedy in the hands of the profession. What sums do communities expend on the cleanliness and purification of cities? Are they not well expended if they diminish the bills of mortality at this rate? Do they often do more than this? To take a common disease, more certainly fatal than even cholera, viz. pulmonary consumption; do we not strive month after month in the use of remedies, and do not our patients compass earth and sea, when the chance of recovery is not one in a hundred? Shall we then reject a remedy which does seven times as much? Do we send a poor invalid, wasted to a skeleton, convulsed with cough, burning with hectic, shivering at every blast, to Cuba, to St. Augustine, or to Italy, away from friends, from the comforts of home, with the almost certain prospect of dying and laying his bones among strangers, while we refuse to the cholera patient the chance which this remedy affords him for restoration, slender as it is? especially as it costs him no additional suffering, and the practitioner but a few hours' attention. Who, if he loved life, would not grasp eagerly at even so poor a prospect as this?

There is one other circumstance which should influence our views of the probable efficacy of this remedy. It has been chiefly employed in Hospitals; and of course in many cases, at least, on subjects who always struggle ill with disease, and who have been exhausted by intemperance, by poor living, cold, too hard labor, and all the other various causes by which the health of the more unfortunate part of mankind is so often undermined. In such, as it appears, the remedy does not succeed, at all. If we could select the temperate and healthy subjects of the remedy, our ratio might perhaps be made much more favorable. It has yet, as I apprehend, so far as published accounts inform us, to be tried on the healthy and temperate individuals in private life who are the subjects of cholera. Hitherto, among ourselves, such subjects have been able to claim no exemption from the disease; a majority of deaths have probably taken place among those who were at least not intemperate.

A good opportunity is afforded here for the trial of venous injection, because the cases are few, and practitioners are not so hurried with them as to have this circumstance divert their minds from the investigation. The result of one case during the past week, though finally terminating fatally, has been sufficiently favorable to encourage us in the experiment; and I trust the result of all cases, whatever they may be, will be faithfully recorded, that among ourselves we may have data by which to judge of the actual value of the practice.

W.

Boston, October 23, 1832.

REGENERATION OF NERVES.*

Remarks on the Regeneration of Nerves. By F. TIEDEMANN.

DIVIDED nerves unite and heal. This fact has been established by the experiments of Fontana, Michaelis, Arnemann, Cruickshank, Haighton, Mayer, by Bichat, and by the more recent observations of Swan, Descot, and Larrey.

The reunion of divided nerves is attended by the following phenomena:—the ends of the nerve retract; the extent of the separation is from two to six lines or more, and is greater in large nerves than small ones. This separation of the extremities of a divided nerve is not owing to elasticity, but is the result of an organic action, or contractility of the neurilema and surrounding cellular tissue; in proof of which it may be stated that divided nerves in a dead animal do not retract. Inflammation soon commences; the surrounding vessels contain more blood; the nerves become of a red color, and are thicker; the inflammation extends from half an inch to an inch above and below the divided extremities; the distention of the vessels, the redness and swelling, are, however, more remarkable in the upper than the lower end. Coagulable lymph is deposited around the separated nerves, and in this lymph minute vessels are observable. In consequence of this deposition in the sheath of the nerves, and among their fibrils, the nerves appear enlarged; the swelling is greater in the upper than in the lower ends. Similar enlargements are discoverable, after the lapse of time, in the ends of nerves divided in amputation.

The coagulable lymph effused during the inflammation, connects the divided nerves in the course of a few days: it gradually assumes a firmer consistence, and the bloodvessels dispersed through it appear to contract, or to contain less blood. The enlarged, or bulbous extremities of the nerves, gradually approaching nearer to each other, at length become incorporated, and thus the connection of the divided nerve is re-established. If the swelling be examined after some time, it is found reddish externally, white internally, and exhibiting fibrils similar in appearance to the nervous fasciculi, and by means of these the nerves become perfectly continuous.

Whether the substance connecting the nerves is similar in organization to the original nerve, and is capable of transmitting sensation, and the influence of the brain in the performance of voluntary motion, are questions which have divided the opinions of physiologists. Arnemann rejected the opinion that the regeneration of true nervous substance took place, having found that, 150 days after their division, the parts supplied by such nerves were destitute of sensation. Breschet, Richerand, and Delpech, adopted the same view.

Fontana, on the contrary, Michaelis, Mayer, Cruickshank, and Haighton, maintain that the reunion of divided nerves takes place by means of true nervous fibrils. Michaelis recognized these fibrils by the microscope, and Mayer demonstrated them by the test of nitric acid. Haigh-

* Translated and abridged from Tiedemann's *Zeitschrift für Physiologie*, iv. band, 1 heft. Heidelberg and Leipsic. 1831.

ton, in proof of the regeneration of nervous matter, stated that the reunited *nervi vagi* were capable of performing their natural functions. He divided the nervus vagus of the one side in a dog, and in six weeks afterwards that of the other side. The animal lived; but when the two *nervi vagi* were divided at the same time, or within a shorter interval, the animals invariably died.

From the preceding experiments and observations, Tiedemann considered it highly probable that true nervous matter was regenerated; he thought, however, that the return of sensation, and the power of motion in parts whose nerves had been divided, was not established so satisfactorily as was desirable. He therefore instituted some experiments on the subject, and one of the most conclusive of these he has detailed nearly as follows. On the 16th of August, 1827, having exposed the brachial plexus of nerves (*arm-nerven-Geflecht*) in a dog, he separated the several nerves, and cut out of each a portion from ten to twelve lines in length. The leg and foot were immediately deprived of sensation and the power of motion. The wound healed in three weeks, but the leg and foot remained without sensation, or the power of motion, for a long time. It became smaller than the opposite one, and, in walking or running, was drawn upwards by means of the muscles of the shoulder.

In May, 1828, eight months after the excision of the portions of nerves, the animal began to use the foot in progression, and showed signs of sensation when it was much pressed, or was pricked with needles; and during this and the following years, sensation and motion were gradually but perfectly restored. In order to examine the condition of the nerves, the animal was killed on June 2d, 1829, twenty-one months after the operation. Where the portions of nerves had been removed, at each extremity of the incision an oval enlargement was found, which was greater at the end nearest the body than the opposite one. In the interval between these enlargements, and connecting them, newly-formed portions, apparently of nerve, were seen. These intermediate portions were thinner than the uninjured parts of the nerve. In order to ascertain whether the regenerated parts really consisted of nervous fibrils, a portion was laid on a piece of glass, and nitric acid applied, but the integrity of the structure remained unimpaired. Hence, from the return of the power of motion and sensation, from the structure of the newly-formed portion, and from the test of nitric acid, Tiedemann concludes this experiment to supply a demonstration of the regeneration of true nervous matter.

Numerous cases are related, for the most part by English authors (as Abernethy, Balfour, Pring, and Swan), of the restoration of sensation after the healing of wounds, in which nerves were divided either by accident, or in operations for the relief of neuralgia. Of these, the most remarkable is related by Abernethy; and one very analogous to it, has been communicated to Tiedemann by Dr. Schott, of Frankfort.

A woman, 40 years of age, had suffered most severely for fourteen years from neuralgia of the ring-finger, particularly of the last joint, for which she could not obtain any relief. Dr. Schott determined, therefore, to remove a portion of the cubital nerve. He laid bare the trunk of this nerve above the inner condyle of the humerus, and removed a

portion of it an inch long. After the division of the nerve, the neuralgia immediately ceased, and the ring and little finger of that hand were deprived of sensation. In order to prevent the reunion of the ends of the nerve, the wound was dressed to the bottom, and healed by suppuration. After three months, the wound was cicatrized, and there was no return of neuralgia ; but gradually sensation returned in the fourth and fifth fingers, and after six months had elapsed she again suffered severe pain in the ring finger, which, however, did not become so violent as before the operation.—*London Medical Gazette.*

NITRATE OF SILVER.

On the Use of the Nitrate of Silver, as an Application in Burns and Scalds. By J. C. Cox, Surgeon, F.L.S. &c.

I TOOK occasion, some time since, to call the attention of the profession to the use of the nitrate of silver in certain cutaneous affections, especially herpes zoster, for which I expressed the opinion that it was almost a specific ; and the employment of that remedy in many severe cases subsequently, has fully confirmed that opinion.

I now desire to recommend the use of the same remedy in burns and scalds, as one more fitted than any other with which I am acquainted, to relieve the present suffering and obviate the future mischief. Where the burn is deep, and has destroyed the vitality of the cutis, of course no superficial application can do more than hasten the separation of the slough, and the spirits of turpentine is still probably the best application ; but where there is extensive superficial lesion, either producing intense redness and pain, or vesication, the nitrate of silver is certainly unrivaled. I have employed it both in very strong solution, and also in the solid form ; but, on the whole, I think the latter by far the best mode of application. The parts being moistened with cold water, the stick of caustic is passed over the whole surface, which may be afterwards covered with cotton wadding and bandaged, where that can be conveniently done. The application does not increase the suffering—all uneasiness quickly subsides, and, in a day or two, the only traces of injury will be the desquamation of the blackened cuticle. Where the process of vesication has commenced, it is immediately arrested ; but if the vesications have been extensive, and the cuticle torn off, or adherent to the dress, there is no application which forms so effectual and complete a protection from the external atmosphere as the lunar caustic. In the latter case, it should be rolled tightly and rapidly over the surface. It appears to combine chemically with the albumen, and to form a covering most beneficial and efficient. Where extensive sloughs have formed, and there is a large granulating surface, the nitrate of silver, in the form of strong solution, applied with a camel's-hair brush, diminishes the irritability of the surface, prevents, to a great degree, the distressing itching, and hastens cicatrization. I would here state that much mischief is frequently done by the use of astringents—as the oxide of zinc, &c.—which cause the cicatrix to contract quickly, and thus to form seams and bri-

dles, which produce frequently great deformity. A young lady, a patient of mine, in dressing for a party, set fire to her pelerine, and severely burned the neck, back, and shoulder. On the shoulder, a large patch was completely disorganized; to this I applied the spirits of turpentine. The other parts were either vesicated or severely scorched, extending over the back and neck; to these I applied the lunar caustic all over the surface, and wrapped the whole up in cotton wadding. In half an hour she became quite easy, went to sleep, and omitted to take the anodyne which was prepared for her. The shoulder was the only part which required any protracted attention.

Master C—, while casting bullets, scalded his hand with the melted lead. He was in great pain, which was only temporarily relieved by cold. I applied the lunar caustic to the surface; the pain was immediately relieved, and the next day there was no soreness or inconvenience.

A boy's face was severely burnt by the explosion of gunpowder. The application of the nitrate of silver completely obviated the ill effects which would otherwise probably have arisen from the accident. The face certainly appeared grotesquely tattooed for a few days, by the application, but all traces were quickly removed.

The above are sufficient exemplifications of a mode of treatment, which will, I am convinced, on trial, be found very beneficial.—*Ibid.*

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LIVES OF EMINENT PHYSICIANS.

We have before us a little book called the *Lives of Eminent Physicians*, in which are contained many singular traits of the characters of the most distinguished individuals who have practised medicine in Great Britain. From these we propose to make a few extracts, for the benefit of such of our readers as may not happen to have met with the work.

Harvey, though so eminent as a naturalist and anatomist, was by no means remarkable for his success in practice. His prescriptions were so complicated, that it was difficult to discover what object he had in view. He himself complained that after the publication of his work on the Circulation, his practice declined; a circumstance which he attributed to the envy of rival physicians. Harvey was severely afflicted with the gout; the attacks he used to treat by placing his legs in cold water, or exposing them to the open air in the coldest weather, as long as it could be borne, and then bring them to the fire. Dr. Good mentions having adopted a similar mode of treatment in his own case, with the happiest effects. The treatise by Harvey, on the Circulation, which gained

him such universal celebrity, was commenced twenty-six years before it was published ; so much time did he devote to bring his discovery to maturity. The work was but ill received ; some declaring that the discovery had been made before, others denying the correctness of his conclusions, and all uniting to refuse to him the applause fairly due to his merit. Harvey was naturally a man of violent temper, and in his youth wore a dagger which he was apt to draw on slight occasions. During his manhood, however, he lived on friendly terms with his medical brethren, manifested no asperity toward his rivals, and was ever ready to acknowledge merit in those who differed from or opposed him. None of his expressions uttered in private conversation appear to have been recorded.

Sir Thomas Browne is less celebrated as a physician than as the author of several literary works, among which the *Religio Medici* has obtained the most extended reputation. The most medical of his writings is a treatise on popular superstitions and errors, a work displaying vast research and erudition, but by no means exempt from evidences of the very weakness which its professed object is to condemn. An anecdote is related of him, which exhibits this failing in a very striking light. Having heard of sympathetic needles, by which, when placed over alphabets, two lovers might correspond, he caused two such alphabets to be made, and having suspended his needles, touched them with the same magnet ; then having giving to one a particular direction, he watched to see whether the other would follow it. The result may be imagined ; but the remarkable circumstance about the story is, that he should have anticipated any different effect. Another of Browne's treatises was on *Urn Burial*. It was occasioned by the accidental discovery of some ancient urns, supposed to be Roman, found in a field in Norfolk. In this treatise he discusses the various funeral customs adopted by different nations, and concludes in favor of burning in preference to all others. Browne was the author of several other treatises, which it is not necessary here to enumerate. His attention to literary pursuits, however, seems not to have interfered in any degree with his professional occupation. His biographer observes of him, that he was parsimonious in nothing but his time ; when he had any to spare from his practice, he was scarce patient of any diversion from his study ; so impatient of sloth and idleness, that he would say he could not do nothing. Browne died at Norwich, the scene of his professional labors, in the year 1682, and the 76th year of his age.

Few names in the annals of medicine stand higher than that of Sydenham ; yet there are few lives more bare of incidents than that of this illustrious practitioner. His career appears to have been singularly quiet and noiseless, and he was far from courting that fame which it was his destiny to acquire. An expression of his feelings on this subject is contained in the following passage of his life.

The part he took in the civil wars, and the politics of his brother, William Sydenham, who, under the Protectorate, obtained many high appointments, amongst others the post of Governor of the Isle of Wight, might possibly have kept him out of favor with the court; in truth, he appears to have been desirous only of conscientiously doing his duty to the utmost of his power, and chiefly anxious to practise his profession in the most unostentatious manner. His distaste for popularity (for it could not be affectation in so candid a nature) may be inferred from these expressions, in the epistle prefixed to his chapter on the gout:—‘I do not much value public applause; and, indeed, if the matter be rightly weighed, the providing for esteem (I being now an old man) will be, in a short time, the same as to provide for that which is not: for what advantage will it be to me after I am dead, that eight alphabetical elements, reduced into that order that will compose my name, shall be pronounced by those who come after me?’

Sydenham showed his sagacity and independence in rejecting the established mode of treating smallpox by heat and stimuli, and allowing the patient cool air. His writings are few in number. In 1666, he published his *Methodus Curandi Febres*, of which a new edition appeared in 1668, together with a chapter on the Plague of London. His description of this appalling pestilence is highly interesting. The method of treatment he adopted, was to bleed largely in the incipient or febrile stage, before the swellings made their appearance; and from his language it might be inferred, that where this remedy was seasonably resorted to, and carried to sufficient extent, the disease was certainly arrested. Sydenham was severely afflicted with gout, although his habits of living were exceedingly temperate. Of his abstemiousness, an idea may be formed from the following description which he gives of his mode of living.

‘In the morning, when I rise, I drink a dish or two of tea, and then ride in my coach till noon; when I return home, I moderately refresh myself with any sort of meat, of easy digestion, that I like (for moderation is necessary above all things); I drink somewhat more than a quarter of a pint of Canary wine, immediately after dinner, every day, to promote the digestion of the food in my stomach, and to drive the gout from my bowels. When I have dined, I betake myself to my coach again; and, when business will permit, I ride into the country, two or three miles, for good air. A draught of small beer is to me instead of a supper, and I take another draught when I am in bed, and about to compose myself to sleep.’

Sydenham died in the year 1689, at the age of 65. A monument was erected to his memory by the College of Physicians in the year 1830, with the following inscription:—

Prope hunc Locum sepultus est
Thomas Sydenham,
Medicus in omne Ævum nobilis.
Natus erat A. D. 1624,
Vixit Annos 65.
Deletis veteris Sepulchri Vestigiis
Ne Rei Memoria Interiret
Hoc Marmor ponti jussit Collegium
Regale Medicorum Londinense, A. D. 1810,
Optime Merito!

THE DIVING BELL AS A REMEDY FOR CERTAIN DISEASES.

AN interesting account of the descent in a diving bell of Mr. Clifford, of Exeter, N. H. and Capt. Tripe, of Dover, is published in the last number of Silliman's Journal, in which the Reverend author* states some facts leading him to the conclusion that excursions of this kind may be useful in cases of Rheumatism. The pulse, on emerging from the bell, was quick, and perspiration very profuse, and the gentlemen found themselves in a fit condition for a comfortable sleep. It seems therefore not unreasonable to expect some relief in cases requiring stimulating diaphoretics, and in which quiet repose is so greatly desired; but since the common sulphur bath accomplishes these objects in a much more speedy and convenient manner, we can hardly expect that the diving bell will ever be a very general resort for these purposes. The fact, however, of the peculiar influence of these descents on the several functions, should be known to medical men; and we will close this part of our notice of it, by a brief extract from the interesting paper of Mr. Alden.

Mr. Clifford had, for many years, been afflicted with rheumatic pains. During the several weeks he was engaged in this enterprise, *he was remarkably free from this complaint.* The first time he descended in the diving bell, he happened to be considerably affected with his disorder; but, on coming out of it, he was entirely relieved from pain, insomuch that he walked, directly after, six miles, without inconvenience. This was an exertion which he had not thought himself able to make for several years before.

Could a series of experiments be instituted, on proper subjects, who will venture to say that the result would not be such as to render a submarine descent, in a commodious diving bell, a frequent and favorite adventure?

But this is not the only view in which these excursions are to be considered by the physician. The very singular effect they have long been known to produce on the organ of hearing, may possibly lead to more useful results.

In descending, says Mr. A., a painful sensation was induced on the tympanum, attended with a noise, as Mr. Clifford informed me, not unlike that of a fly entangled in a spider's web, till the adventurers were at the depth of about twelve feet, when, experiencing a sudden shock, they were completely relieved. This painful sensation, the shock, and subsequent relief, were regularly repeated, as nearly as could be judged, every twelve feet. After a few descents, it was perceived that, by being raised a foot or two, every eight or ten feet, the shock was avoided, and the men were freed from that painful sensation, which had resulted from the uniformly increasing density of their atmosphere.

Upon the above, Dr. Mease, who communicated the account to the American Journal, makes the following remarks:—

The painful sensation in the ear, mentioned in the preceding paper, is invariably experienced by those who descend in diving bells, owing to

* Rev. Timothy Alden, of Portsmouth, N. H.

the compression of the condensed air on the membrana tympani; but the means of preventing it, which were discovered by Messrs. Clifford and Tripe, are not mentioned in any of the accounts of diving which I have read, nor do the writers of them notice the 'shock' felt by the Portsmouth divers which immediately preceded their relief from the pain. Dr. Hamel, of St. Petersburg, states that he was relieved of the pain by making exertions to admit air through the Eustachian tube into the ears, but succeeded in accomplishing this at first only on one side, when the air rushed into the cavity of the right ear, and the pain ceased instantly; when in the diving bell, he was not aware of the simple way in which it is effected. Dr. Wollaston informed him, that nothing is wanted but to swallow the saliva, as may be seen from the following simple experiment. Close your nostrils with the fingers, and suck, with the mouth shut: air will come through the Eustachian tube from the ear, and you feel pressure on the membrana tympani, which prevents you from hearing distinctly. As the end of the tube nearest to the mouth acts like a valve, this sensation will often remain even after you have ceased sucking. To remove it, nothing is wanted but to swallow saliva, whereby the action of the muscles seems to open the end of the tube, and then the air rushes in to re-establish the equilibrium. During the descent of the bell, Dr. Hamel says that the pain returned; but as he repeated his exertions to open the Eustachian tube, the air at intervals found a passage through it, and he obtained relief. Through the left Eustachian tube no air had yet passed, and the pain in the left ear was gradually increasing; when about fourteen feet under water, the sensation was as if a stick was forced into the ear from without: at last, during one of the exertions to open the mouth of the tube on that side, the air forced its way in with considerable violence through it, and he was relieved from the pain also on that side. I presume the 'shock' experienced by the Portsmouth divers, arose from the rushing of the air into and through the tubes, as it took place immediately preceding their obtaining relief from the pain in their ears. It may be useful to state, that this pain will be much diminished, if the bell be allowed to descend slowly, so as to admit the air gradually into the ear. In ascending, Dr. Hamel says the pain returned, resulting from the air in the inner cavity of the ear expanding, as the external pressure was diminished; but it was more easily relieved, the air gushing occasionally from the ear through the Eustachian tubes into the mouth.

Dr. H. suggests the probability of the diving bell being used with success for the cure of deafness, in those cases where it depends on an obstruction of the Eustachian tube. The patient would have to go down in a diving bell, and make exertions to open the mouths of the Eustachian tubes, and then by the pressure of the condensed air it would be forced through the extent of the tube, and thus clear the passage. He thinks that the fact of such slight obstructions having been frequently removed by forcing air or tobacco smoke from the mouth into the ear, gives weight to the idea: but it is questionable whether the deaf person would be able to bear the great pain which it is reasonable to suppose he must endure from the condensation of the air on the tympanum, until the removal of the obstruction; and his sufferings might be so great as to deprive him temporarily of his presence of mind, and even of his senses. The experiment ought not therefore to be made, unless another person enjoying his hearing accompanied the patient. I have more well grounded confidence in syringing the ears with warm milk and water, to remove hardened wax. The relief experienced by Mr. Clifford from the rheumatism, after his diving, is well worth consideration by the faculty.

THE CHOLERA IN OHIO.

We regret to hear that the cholera threatens to prevail more extensively in this Western State than was at first anticipated. The following notices of its progress are selected from the public papers.

Columbus, Oct. 13.—A letter from a gentleman at Mt. Vernon, dated on Tuesday last, informs us that on the Friday preceding a man residing about three miles from that place, who had recently visited Cleveland, was attacked with spasms, and died on Sunday following, in spite of the utmost exertions of three medical attendants. On Monday, Dr. Maxwell of Mt. Vernon, one of the physicians who had attended on the deceased, was suddenly seized with the most alarming symptoms of cholera, and survived only about 12 hours.

Cincinnati, Oct. 12.—The cholera is raging fiercely, and more malignant than it was in N. York. Those taken do not live more than three to six hours, and nearly every case, so far, has terminated fatally. It is more indiscriminate here than elsewhere; it attacks high and low. The report to-day is 23 cases for the last 24 hours, and it only commenced this week.

October 13.—Thus far the panic among our citizens, in regard to the cholera, has not been great. There is, happily, a disbelief prevailing in the community, in the contagiousness of the disease. We have heard of but one or two families that have left the city. As yet there has been little or no interruption to business of any kind.

The number of cases, reported by the Board of Health for the last twenty-four hours, ending at 12 o'clock yesterday, was nineteen, of which twelve had proved fatal. There is reason to believe that all the cases have not been reported.

BOSTON DISPENSARY.

At the annual meeting of the Contributors to the Boston Dispensary, on the 11th inst. the following gentlemen were chosen Managers for the ensuing year, viz.: Edward Tuckerman, S. H. Walley, Isaac Winslow, Benj. Guild, Gideon F. Thayer, Samuel T. Armstrong, Jona. Phillips, Samuel May, George H. Snelling, Otis Everett, N. P. Russell, and Rev. N. L. Frothingham. Gideon Snow, Esq. was re-elected Treasurer.

At a subsequent meeting of the Managers, Edward Tuckerman was chosen Chairman; George H. Snelling, Secretary; and the following Consulting and Visiting Physicians for the year ensuing.

Consulting Physicians.—John Dixwell, M.D., John Randall, M.D.

Visiting Physicians.—District of Wards 1 and 3, Augustus A. Gould, M.D.—Of Ward 2, Ezra Palmer, jr. M.D., Henry Dyer, M.D.—Of Wards 5, 6 and 7, Jos. Roby, M.D.—Fort Hill District, James Wood, M.D.—Broad Street, Paul Stimpson, M.D.—Of Ward 10, Edward J. Davenport, M.D.—Of Ward 11, Alexander Thomas, M.D.—Of Ward 12, J. B. S. Jackson, M.D.—S. Boston District, C. S. Whitman, M.D.

The following is an abstract from the returns of the nine Visiting Physicians of the Dispensary, for the year ending Sept. 30th, 1832:—Whole number of cases, 3040. Cured, 2712. Relieved, 74. Still under treatment, 70. Removed, 47. Dismissed, 28. Dead, 96. Incurable, 13. Births, 166.

A new Plant which furnishes a wholesome and limpid Water.—The English have discovered in the countries which they have recently added to their empire in India, a shrub, the stem of which, when cut, furnishes a great quantity of pure and limpid water. The natives are very familiar with this precious property; in consequence of which, it is very rare to find a whole and well preserved plant of this kind. It climbs up trees to a very great height; it has not yet been described.—*Recueil Industriel.*

M. ORFILA has suffered a violent attack of cholera at Paris. His disease was attacked with vigor, and, we are happy to add, with success.

Whole number of deaths in Boston for the week ending Oct. 19, 34. Males, 25—Females, 9.

Of cholera malignant, 6—scarlet fever, 1—dropsy on the brain, 1—old age, 1—disease of the glands, 1—brain fever, 1—consumption, 4—intemperance, 1—delirium tremens, 2—infantile, 3—cholera infantum, 1—burns, 1—inflammation in the bowels, 1—croup, 2—canker in the bowels, 1—lung fever, 2—apoplexy, 1—throat distemper, 1.

ADVERTISEMENTS.

ALLEN & TICKNOR,

HAVING purchased of Messrs. CARTER & HENDER the retail department of their Bookselling Establishment, including their general stock of Medical Books, will continue the business at the store lately occupied by C. & H., corner of School and Washington Streets, where they will keep constantly on hand a complete assortment of Medical, Theological, School and Miscellaneous Books, and a complete assortment of stationery, Cutlery, &c. &c., English and American, wholesale and retail.

N. B. Particular attention paid to Medical Books.

The Physician's Case Book.

Just published, by Allen & Ticknor, A Case Book for Registering Cases and Occurrences that may be considered important in Medical and Surgical Practice. eopst. Oct. 24.

BOYLSTON MEDICAL PRIZE QUESTIONS.

At the Annual Meeting of the Boylston Committee on Prize Questions, held on Wednesday, the 1st day of August, 1833, a premium of Fifty Dollars, or a Gold Medal of that value, was awarded to Robert W. Hazali, M.D., of Richmond, Virginia, for a Dissertation on the following question: 'What is the cause of Pleuritis Lachrymalis; and what is the best mode of treating this disease?'

The following questions for 1833 are before the public, viz: 1st. 'The History of the Autumnal Diseases of New England.'

2d. 'What insects in the United States, and particularly in the Northern part, are capable of inflicting poisonous wounds? The phenomena of such wounds, and the best mode of remedying their ill consequences?'

Dissertations on these subjects must be transmitted, post-paid, to John C. Warren, M.D., Boston, on or before the first Wednesday of April, 1834.

The following questions are offered for the year 1834, viz: 1st. 'What is the true nature of Polypus in the nostrils; and in what manner may the disease be best treated?'

2d. 'Are the restrictions on the entrance of vessels into port, called Quarantine Laws, useful? If so, in what cases should they be applied?'

Dissertations on these subjects must be transmitted as above, on or before the first Wednesday of April, 1834.

The author of the successful dissertation on either of the above subjects, will be entitled to Fifty Dollars, or a Gold Medal of that value, at his option.

Each dissertation must be accompanied with a sealed packet, on which shall be written some device or sentence, and within which shall be enclosed the author's name and place of residence. The same device or sentence is to be written on the dissertation to which the packet is attached.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, if called for within one year after they are received.

By an order adopted in the year 1833, the Secretary was directed to publish annually the following votes:

1st. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which the premiums may be adjudged.

2d That in case of the publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

GEORGE HAYWARD, Secretary.

Boston, August 4, 1833.

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